



WOMEN'S EXPERIENCES ON FOOD SECURITY IN KENYA: Major Challenges That They Face

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Abstract

This paper discusses the major challenges women in Kenya face as they try to ensure and maintain food security at the household level. The challenges include access to and ownership of resources such as land, finance, water and affordable cooking energy; access to markets and proper infrastructure and education. The paper demonstrates that women in Kenya lack land ownership deeds since land is owned by either their husbands or male relatives. Women also spend a lot of time walking long distances in search of water and wood fuel which prevents them from engaging in other income generating activities. Moreover, poor infrastructure also makes it difficult for women to access markets for their products or to buy food even when they may have the income. Poor storage facilities or lack of such facilities makes it difficult for women to store food during times of glut and enable them to militate against food insecurity during times of drought. Finally, the paper shows that poor education or the lack of it makes it hard for women to know the nutritional contents of various foods. Furthermore, this lack of

education also makes it difficult for them to get employment and earn an income that is sufficient to maintain food security at the household level. This paper recommends that there should be sensitization of men and women to the requirements of the Constitution that women should be equal to men in their rights to inheritance. It is, therefore, imperative that County Governments, NGOs, civil societies and community-based organizations should hold civic education sessions for both men and women and educate them on the same. Women should also be involved in the planning and implementation of various projects that have an impact on their lives. Water, energy and road infrastructure projects should involve women in their identification, planning and implementation. Educating girls benefits the whole community and so just like sensitization on land ownership, parents should also be educated through civic education on the need to educate the girl child because this will translate to improved welfare both for her and the household as well in terms of improved nutrition and food security.

Key words: Food security; food insecurity, food security policy water, land, energy, infrastructure, markets, constitution, experiences, women.

7.1 Introduction

Food security is a situation that exists where all people at all times have physical, social, and economic access to sufficient safe and nutritious food that meets their dietary needs and food preference for an active and healthy life.¹ Accordingly, food security can be viewed from a national, household or nutritional point of view. National food security requires both the production and the ability to import food from global markets to meet a nation's consumption needs. On the other hand, household food security is the year-round access to an adequate supply of nutritious and safe food to meet the nutritional needs of all household members.

Nutritional security requires that household members have access not only to food, but also to health care, a hygienic environment, and knowledge of personal hygiene. Food security is necessary but not sufficient for ensuring nutrition security.²

Food security is built on three pillars: that is, food availability which means sufficient quantities of food available on a consistent basis; food access which means having sufficient resources to obtain appropriate foods for a nutritious diet and food use which is the appropriate use based on the knowledge of basic nutrition and care, as well as adequate water supply and sanitation. The indicators of food security are food production, income, total expenditure, food expenditure, share of expenditure on food, calorie consumption and nutritional status. Hunger is the most

commonly used term to describe the social condition of people who frequently experience, or live with the threat of experiencing, the physical sensation of hunger.³

Global Food Security

As reported in June 2009 (BBC, 2009, "World Hunger Hits One billion";

<http://news.bbc.co.uk/2/hi/europe/8109698.stm>), the number of malnourished people in the world rose to over 1 billion, up from 915 million in 2008. The World Health Organization (WHO) cites malnutrition as the gravest single threat to the world's public health and the biggest contributor to child mortality in the world. Countries with the most alarming hunger status are predominantly located in sub-Saharan Africa where one in three persons suffers from chronic hunger (WHO, 2014).

FAO (2012) reports that about 870 million people are estimated to have been undernourished (in terms of dietary energy supply) in the period 2010–12. This figure represents 12.5 per cent of the global population, or one in eight people. The vast majority of these, that is, 852 million, live in developing countries, where the prevalence of undernourishment is now estimated at 14.9 percent of the population. It is generally the work of women to ensure food security at the household level worldwide.

7.2 Food Insecurity in Kenya

About a third of Kenya's population is considered to be food insecure. Currently over ten million people in Kenya suffer from chronic food insecurity and between two and four million people require emergency food

¹World Food Program (WFP) 1996; and FAO (2006)

²www.ifad.org/hfs/thematic/rural/rural_2.htm

³<http://www.fao.org/hunger/hunger-home/en/>

assistance at any given time. Nearly 30 percent of Kenya's children are classified as undernourished, and micronutrient deficiencies are widespread.⁴ Kenya is one of 15 countries most at risk of food insecurity as measured by the World Food Program Food Security Index. It's shocking that Kenya is ranked number 11 out of 163 countries with a food security score of only 1.22.

The Global Hunger Index (GHI) estimated by the International Food Policy Research Institute (IFPRI) to measure and track global hunger ranks Kenya the country number 55 behind such countries as South Africa, Uganda, Congo DR and Malawi, among other countries in terms of global hunger index indicating a serious food security problem. African Women's Studies Centre and KNBS (2014a) found that nine percent of Kenyans suffer from chronic food insecurity as shown in Table 1. About 24.4 percent suffer from low food insecurity and only 66.6 percent are food secure. However, counties such as Turkana have approximately 39.2 percent of their people suffering from chronic food insecurity, followed by Kisii at 24.2 and Migori at 20.8 percent. Only 23 percent of households in Turkana County are food secure, 34 percent in Kisii and 42 per cent in Migori.

Table 1: County Food Security Score in Kenya

County	Food secure (%)	Low food security (%)	Chronic food insecure (%)	N
Baringo	75.4	16.1	8.5	211
Bomet	83.7	14.8	1.5	196
Bungoma	65.4	30.8	3.8	211
E. Marakwet	76.0	20.2	3.8	208
Isiolo	47.6	37.7	14.6	212
Kajiado	80.7	17.9	1.4	207

Kiambu	84.2	15.3	.5	215
Kirinyaga	94.8	4.7	.5	192
Kisii	33.8	41.9	24.2	198
Kwale	46.9	43.1	10.0	209
Laikipia	75.7	16.8	7.6	185
Makueni	66.5	26.1	7.3	218
Migori	41.7	37.5	20.8	168
Mombasa	65.1	28.4	6.4	218
Nairobi	73.8	14.5	11.7	214
Nakuru	86.4	10.9	2.7	221
Nandi	65.1	23.3	11.6	215
Taita Taveta	74.0	20.0	6.0	215
Trans Nzoia	55.9	36.6	7.5	186
Turkana	23.4	37.3	39.2	158
Average	66.6	24.4	9.0	4060

Source: African Women's Studies Centre and KNBS (2014a)

The Republic of Kenya (2011) reports that in Kenya, per capita food availability has declined by more than 10 per cent over the last decade. The Policy paper says that food availability and access in Kenya are influenced by the ability of individuals and households to produce their own food in sufficient quantity and to generate income to purchase food, the adequacy of infrastructure, effectiveness of food distribution systems and the affordability of food prices. Other factors include access to and control of productive resources (land, seed and water), governance, legal and regulatory frameworks, the macroeconomic environment, gender dynamics, HIV/AIDS and other diseases, emergencies and conflicts.

Kenya is East Africa's largest importer of food and agricultural products (United States Department of Agriculture [USDA], 2009) and faces an alarming rate of food insecurity in the wake of rising food prices. According to the World Food Program (WFP), the average Kenyan family spends almost half of their household income on food which is an indicator of poverty and food insecurity (WFP, 2011). While several factors have contributed

⁴Republic of Kenya (2008).

to Kenya's high rate of food insecurity, the Kenya Government has neglected agriculture development over the years where the revenue allocation to the sector from total revenue is less than the continentally agreed 10 per cent at the Maputo Protocol.

From the foregoing, Kenya has a real problem in terms of food security and can be classified as one of those countries suffering from food insecurity. Article 43 (1)(c) of the Constitution of Kenya (2010), guarantees food security to all Kenyans and this right to food as presented in the Kenya Constitution implies three obligations of the government: respecting, protecting and fulfilling that right, meaning that it has to implement strategies that will guarantee food security to all Kenyans.

Food availability and access in Kenya are influenced by the ability of individuals and households to produce their own food in sufficient quantity and to generate income to purchase food; the adequacy of infrastructure; the effectiveness of food distribution systems; and the affordability of food prices. Other factors include access and control of productive resources (land, seed and water), governance, legal and regulatory frameworks, the macroeconomic environment, gender dynamics, prevalence of HIV/AIDS and other diseases, emergencies and conflicts. The African Women Studies Centre and KNBS (2014a), Study shows that approximately 18 per cent or about 7.1 million Kenyans are chronically food insecure, being often or always hungry. Table 2 shows the average manifestation of food insecurity in Kenya by county.

Table 2 shows that 67.3 per cent of the people in Turkana are food insecure, followed by Kisii

at 58.5 per cent and Migori at 44.1 per cent using a list of questions to investigate the level of food insecurity in Kenya. The table also shows that 48.1 per cent Turkana people go to bed hungry.

According to the African Development Bank (2007), women are more likely than men to be poor, and they are more vulnerable to adverse shocks. In Kenya 54 per cent of rural women and girls and 63 per cent of urban women and girls are estimated to live below the poverty line. Nearly half of all female headed households are considered to be poor and the ADB (2007) contends that 42.2 per cent of female headed households were poor in 2005/2006 compared to 30 per cent male headed ones.

Table 2: Average manifestation of food insecurity in Kenya by County

County	E1: Did you worry that your household would not have enough food?	E2. Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E3. Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E4. Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05. Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough?	E06. Did you or any other household member eat fewer meals in a day because there was not enough Food?	E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08. Did you or any household member go to sleep at night hungry because there was not enough food?	Average Manifestation of food insecurity
	percent	percent	percent	percent	percent	percent	Percent	percent	percent
Kirinyaga	8.3	7.8	6.8	9.4	6.3	4.7	3.1	2.1	6.1
Nakuru	14.0	18.1	7.7	14.0	14.9	14.0	7.2	4.5	11.8
Kiambu	15.9	18.6	6.0	18.6	13.0	11.2	8.4	6.0	12.2
Kajiado	17.6	18.6	22.0	15.5	15.4	12.6	11.0	5.3	14.8
E. Marakwet	16.7	14.8	11.9	14.3	19.0	18.3	13.8	11.0	15.0
Bomet	22.8	25.5	20.8	18.3	14.7	14.2	6.1	3.6	15.8
Baringo	20.8	18.4	21.2	22.6	19.4	20.4	18.9	15.6	19.7
Taita-Taveta	23.3	25.2	18.9	22.6	21.7	20.2	15.7	15.1	20.3
Mombasa	26.0	26.5	20.5	27.4	26.0	25.1	24.3	16.1	24.0
Laikipia	23.1	27.6	23.7	39.2	31.9	25.9	17.2	7.5	24.5
Bungoma	31.0	33.8	18.8	28.3	29.7	25.6	20.2	12.7	25.0
Nairobi	25.7	30.4	18.7	33.6	29.0	26.2	19.6	20.1	25.4
Isiolo	35.8	41.7	27.8	33.0	38.7	36.3	32.5	25.5	33.9
Nandi	30.2	38.1	16.7	36.3	33.0	28.4	23.7	12.6	27.4
Makueni	28.2	37.3	21.4	33.6	33.6	31.5	21.0	17.9	28.1
Kwale	47.1	48.6	25.7	39.0	41.9	43.3	24.8	16.7	35.9
Trans Nzoia	41.7	54.5	35.3	47.6	41.7	35.3	22.0	17.2	36.9
Migori	53.5	55.9	31.2	51.8	47.1	45.8	35.9	31.8	44.1
Kisii	59.1	68.0	62.6	70.7	62.1	62.9	47.0	35.5	58.5
Turkana	70.3	70.9	70.9	73.4	71.5	74.1	59.5	48.1	67.3

Source: African Women's Studies Centre and KNBS (2014a)

The African Women's Studies Centre and KNBS (2014a) found that households that are headed by women are more food insecure than those headed by males as shown in Table 3.

Table 31: Hunger Indicators by Gender of the Household Head

Question	Gender of Household Head	Never	Sometimes	Often	Always
		percent	percent	percent	percent
E1: Did you worry that your household would not have enough food?	Male	28.5	44.4	16.3	10.8
	Female	22.6	42.6	18.4	16.4
E2. Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	Male	23.1	46.9	19.6	10.4
	Female	18.1	43.0	23.0	15.9
E3. Did you or any household member eat a limited variety of foods due to lack of choices in the market?	Male	40.2	37.8	14.3	7.7
	Female	35.5	38.0	15.9	10.6
E4. Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	Male	24.0	46.8	19.6	9.6
	Female	18.8	45.3	21.9	14.0
E05. Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough?	Male	27.7	45.2	18.5	8.6
	Female	21.4	43.9	20.9	13.8
E06. Did you or any other household member eat fewer meals in a day because there was not enough Food?	Male	31.2	43.3	16.9	8.6
	Female	22.6	44.5	19.3	13.6
E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	Male	44.8	36.7	13.1	5.4
	Female	36.6	37.2	17.7	8.5
E08. Did you or any household member go to sleep at night hungry because there was not enough food?	Male	55.6	30.9	9.2	4.2
	Female	45.1	35.1	13.0	6.7

Source: African Women's Studies Centre and KNBS (2014a)

It is clear from the findings that female headed households were more food insecure than the male headed ones. This situation is attributed to various factors such as gender based discrimination, which makes female-headed households more vulnerable to food insecurity and poverty. Although the position of women in the agricultural food chains is critical, they encounter many obstacles due to restricted land rights, inadequate education and

outdated social traditions which usually limit their ability to improve food security status for their households and communities at large. Women also face different forms of discrimination, such as greater reluctance on the part of input providers to provide credit for fertilizer purchases for female headed households as compared to male headed households and less scope to borrow money or to buy food on credit.

Despite their multiple roles at the household level women play a key role in household food security in relation to availability, access, utilization, and sustainability. The role of women in food security is now being recognized, and especially the major issues of their rights and access to resources which influence their ability to produce food and ensure household food security (World Bank, 2012; FAO, 2011). The African Women's Studies Centre (2014a) found that where women have the power to make decisions as household heads, particularly among the agricultural communities such as Kirinyaga, their families were the most food secure.

For women to ensure and maintain food security, they require access to and ownership of resources such as land where they can grow food to ensure food availability; access to water to use either for irrigation or for the preparation of food; access to cash from employment, the sale of their produce or remittances from the government, relatives or local or international donor agencies such as the church. Furthermore, women need access to an affordable energy source to prepare food; access to proper storage facilities to ensure sustainability of food security; access to markets to purchase food when they do not produce it themselves; proper infrastructure to transport the produce for sale or to access food in the market and a certain level of education for them to be able to know the right nutritional value of certain foods and the right quantities for both themselves and their families. The main objective of this paper is to document women experiences in food security and the challenges they face in order to ensure food security at the household level.

7.3 Women, Gender Inequality and Food Insecurity in Kenya

Women face significant barriers in agriculture, especially inequalities in access to and control over crucial resources and inputs such as land, labour, fertilizer and formal finance. Women also face barriers to membership in rural organizations and cooperatives, agricultural inputs and technology such as improved seedlings, training and extension as well as in marketing services.⁵

The AWSC (2014a) Food Security Baseline Study also found that female headed households were more food insecure than the male headed ones. This could be attributed to various factors such as gender based discrimination, which renders female-headed households more vulnerable to food insecurity and poverty. Women in agriculture encounter many obstacles due to restricted land rights, inadequate education and outdated social traditions which usually limit their ability to improve the food security status of their households and communities at large. Women also face different forms of discrimination, such as greater reluctance on the part of input providers to lend credit for fertilizer purchases to female headed households as compared to male headed households as well as fewer opportunities to borrow money or to buy food on credit. Kassie, Wagura, and Shiferaw (2012) also found that in Kenya female headed households are 13 per cent less likely to be food secure than male headed households. Their study also found that female headed households face 3 and 12 per cent higher probability of chronic and transitory food

⁵ Alderman, et al. (2003); Brown, et al. (1995); Quisumbing (1994); Saito, et al. (1994).

insecurity, respectively, than male headed household and that male headed households have about 5 and 9 per cent higher probability of food security than female headed households.

Mehra and Rojas (2008) claim that rural women produce half of the world's food and, in developing countries, between 60 percent and 80 percent of food crops. Women also are more likely than men to spend their income on the well-being of their families, including more nutritious foods, school fees for children and health care. Their study also asserts that a key failing of past efforts to reduce hunger and increase rural incomes has been the lack of attention paid to women as farmers, producers and farm workers – both wage and non-wage and especially the rural women who practise small scale farming. Small-scale women farmers represent the majority of rural poor populations in developing countries. Most low-income women in developing countries live and work in rural areas, and agriculture is their primary source of employment. They produce both food and cash crops and have multiple and diverse roles. They work on their own plots and those of others; they work as unpaid or paid workers, employers and employees, and as wage-labourers in both on- and off-farm enterprises (Mehra and Rojas, 2008).

Food security issues at the household level are women's issues since men are more involved in paid work and most of them don't like farm work and would prefer working in offices or other white collar jobs. Young people do not also like doing manual work, and therefore, the work of maintaining food security at the household level is left to old women who do their farming on small family plots. In fact, the average age of a Kenyan farmer is 60

years although a large proportion of the Kenyan population is below 35 years.

7.4 Methodology

The paper used multiple sources of data and information to document results of findings from other studies on women experiences on food security and challenges they face to ensure and maintain food security in Kenya. The main sources of research material were published journal articles, book chapters, government publications, United Nations publications and Internet sources. Also used were findings from two country wide studies done by the African Women's Studies Centre and KNBS presented in the "Status Report on Kenya National Food Security" and "Women Experiences on Food Security in Kenya: Filling the Granary". These studies used primary data collected in 2013. The methodologies used in the data collection included face to face/in-depth questionnaires; focused group discussion (FGD) and oral testimonies.

7.5 Results and Discussion

This section discusses the experiences and challenges women in Kenya face in order to ensure and maintain food security at the household level.

7.5.1 Access to and ownership of resources

In their study, Copeland and Guertin (2013) assert that women produce fifty per cent of the world's agricultural output, but own approximately two per cent of its land. It is true that food security cannot be achieved without women but they encounter many obstacles due to limited land rights which make it difficult for them to improve food security conditions for their families and their communities.

FAO (2013) claims that women would produce 20 to 30 per cent more food than men if they had access to the same resources such as land as men. This has the potential of removing 100 to 150 million people from poverty and malnutrition. Therefore, to improve food security, there is need to ensure equal rights to land and property, women's participation in the market place and improved education opportunities for women.

Copeland and Guertin (2013) assert that the right to own, control and access land is fundamental to both food security and gender equality. Ownership, control and access to land can ensure that land is used to produce food for household consumption while the surplus can be sold to provide additional income that can be used to purchase food, or meet healthcare and other livelihood needs. Citing the World Bank, Copeland and Guertin (2013) state that property ownership for women increases their bargaining rights, improves family stability and bolsters household economies. Most international statutes and national constitutions protect gender equality, especially with regard to land and other property rights, as well as education and general food security but this does not always translate into practice due to traditions and social norms that regard men as the owners and custodians of family land.⁶ According to Kameri-Mbote, access to, control over and ownership of land is influenced by diverse factors which include gender, age and marital status. Land in Kenya is mainly controlled by male household heads on the assumption that they hold in trust the rights for all members of the household. In Kenya only

five per cent of all women are registered landholders. African Women's Studies Centre (AWSC) (2014b) found that only 20.7 per cent of women in Kenya own land compared to 43.8 per cent of men as shown in Table 4.

Table 4: Percentage of Land Ownership Distribution by County

County	Who Owns the Land you Access? (%)					
	Self	Husband	Relative	Community	Leasing	GoK
Kajiado	27.6	34.5	17.2	20.7	-	-
Baringo	12.8	46.2	28.2	-	10.3	2.6
Laikipia	17.2	31.0	10.3	-	37.9	3.4
Makueni	15.4	48.7	35.9	-	-	-
Kiambu	30.3	39.4	24.2	-	6.1	-
Nakuru	20.0	20.0	37.1	5.7	17.1	-
Mombasa	17.6	35.3	35.3	-	5.9	5.9
Nairobi	22.7	45.5	27.3	4.5	-	-
Bomet	13.2	50.0	26.3	5.3	5.3	-
Kisii	16.7	50.0	23.3	6.7	3.3	-
Elgeyo Marakwet	20.5	46.2	23.1	2.6	7.7	-
Kirinyaga	15.8	50.0	23.7	2.6	5.3	2.6
Kisumu	40.0	43.3	16.7	-	-	-
Kwale	25.7	45.7	22.9	2.9	2.9	-
Bungoma	19.4	61.1	8.3	-	11.1	-
Total	20.7	43.8	23.9	3.3	7.6	.8

Source: AWSC (2014b) *Women Experience on Food Security Final Draft*

This denial of equal property rights puts Kenyan women at greater risk of food insecurity, poverty, disease, violence, and homelessness. For example, in a study conducted in Kajiado County in Kenya by African Women's Studies Centre in 2013, a lady known as Mary while giving her oral testimony said that the land which she had built her house on and where she cultivated her crops was not hers and she was afraid that one of these days she was going to be evicted.

"The shamba where I have constructed my house is not mine. Surveyors within the region determined that the land belongs to

⁶Kameri-Mbote (2009).

the Sasi family. Before the land dispute we planted maize and beans. We also kept cows and goats. The land dispute began over 10 years ago after the death of my husband and before his death, I was able to plant and keep livestock, but as he is dead now, there is no security, hence I don't do this anymore because of the land dispute".

Mary's testimony shows that women have only usufruct rights to land while their husbands are alive but after that, male relatives have a right to take the land away from them as they can only use the land but not own it.. Table 4 also shows that 23.9 per cent of the land that women have access to belongs to their relatives which puts them in a very precarious situation in terms of food security. Another respondent also from Kajiado County, Abigail said: *"Yes, I have access to land; but the land is not mine. It is a group ranch"* while Moleyian said: *"I have no land at all as it belongs to the community"*.

Abigail's statement is corroborated by Table 4 which shows that 3.3 per cent of the land that women use is owned by the community. Even though the women have access to the use of the land, the majority of them do not have the freedom to decide how to use the land. These decisions are made by the husband or male relatives, and of course, this impacts on food security because the community decides how the land is used and in most cases, these decisions are made in the absence of the women who are supposed to ensure food security at the household level. A study by AWSC (2014) found that even though 38.8 per cent of the women in Kenya make decisions on what to grow on the land, the men have the last say on what to be produced and women

have no voice since men say the women came without land when they got married. Women, therefore, have to ask the men where they can plant their crops. Most of the women also claimed that they do not see the proceeds from the sale of farm produce since this is handled by the men.

Smith, Theano, Torbett, and Toussaint (2008) assert that before the enactment of the new constitution in 2010, Kenya's myriad land statutes discriminated against women by: (a) invoking customary law which generally confers exclusive control of land on men, to govern land rights; (b) vesting in men absolute sole ownership rights to registered land; and (c) adopting procedures that insulate customary laws from appeal and judicial scrutiny. However, even with the new constitution, customary land law still prevails because it is very hard to change people's mind set and women still have to fight to have the same land rights as men and especially at the household level. It is even worse for unmarried or divorced women who have returned to their parent's home since it is expected that women are supposed to be married and inherit land from their husbands. In such cases, the brothers or male relatives disinherit them and although some women try to fight for their rights, they find it very difficult since the whole affair is very costly and most times such cases lead to a lot of family feuds which most women would want to avoid.

Without secure land rights, women farmers have little or no access to credit or the benefits of membership in rural organizations such as cooperatives which are mainly the avenues of agricultural inputs and services. Women also lack any collateral that could be used as a guarantee to access credit and most of the

times lack of a land title restricts the type of crops that may be grown such as cash crops which are a source of income which can be used to purchase food.

7.5.2 Access to Water

One of the three pillars of food security is utilization and water is an essential ingredient for this. The Republic of Kenya (2007) Vision 2030's goals, including food security, improved water, sanitation and social services for all, cannot be achieved unless women take equal part in the development process (*World Bank, 2010*). Vision 2030 plans to have more infrastructure projects, such as dams, pipelines, and irrigation systems, to be built so as to bring water closer to people. The World Bank (2010) notes that 15 million people in Kenya are on the fringe of water services, dependent on sometimes distant wells, ponds, trucked-in water or rainfall for farming or personal use. AWSC (2014a) found that on average 23.5 per cent of Kenyans rely on low and unreliable rainfall both for use at home and for farming as shown in Table 5.

Table 5: Lack of Water due to Low and Unreliable Rainfall

County	Low/unreliable rainfall (%)
Kiambu	8.3
Nairobi	11.1
Makueni	53.8
Kajiado	38.9
Taita Taveta	46.7
Kirinyaga	27.3
Bungoma	13.6
E. Marakwet	22.2
Baringo	11.8
Nandi	16.7
Nakuru	20.0
Trans Nzoia	15.4
Turkana	29.4
Bomet	27.3
Migori	15.8
Kisii	14.3
Mombasa	0
Kwale	30.4

Isiolo	30.4
Laikipia	35.7
Average	23.5

Source: African Women's Studies Centre and KNBS (2014a)

Counties such as Makueni and Taita Taveta are the most afflicted. During the drought, women and girls who are the traditional water collectors and food producers walk five km or more to look for water and many of them are forced to quit or stop other businesses, stop going to school in order to meet the family's and animals' water needs as water becomes increasingly scarce. The World Bank (2010) reports that 83 per cent of people in Kenya's urban areas have access to clean water which is water protected from contamination such as faecal matter and only 51 per cent of people in rural areas have the same access. The report also notes that only 12 per cent of people in rural areas have water connected to their homes which means that they have to travel many kilometres to fetch water. About 30 per cent of Kenya's population has access to improved sanitation which is defined as a facility that hygienically separates human excreta from human contact. It is, therefore, important that water be brought closer to households and families so that women can improve food security, spend time doing other businesses and activities and also that girls can stop dropping out of school to help in water collection.

The AWSC (2014b) found that in counties such as Kajiado which is semi-arid, women travel for kilometres looking for water both for animals and for domestic use. They traverse very harsh terrain with children on their backs to look for this precious commodity and this is in addition to other household chores that they have to do on a daily basis. Quisumbing and

Meinzen-Dick (2001) contend that it is the women who most of the times have the primary responsibility to provide water for domestic uses such as drinking, cooking, and washing. Lack of access to clean and convenient water sources costs women millions of dollars and hours in time and labour spent on searching for water. It also adds to the burden of caring for those who fall ill because of contact with polluted water supplies. Responsibilities to collect water or care for the sick further limit girls' school attendance.

The AWSC (2014b) found that in Kenya about 86 per cent of the women respondents depended on rain water to grow their crops. Only four percent cited boreholes as source of water while three percent indicated tank/rain-harvested and another three per cent got their water supplies from a dam.

Kassie, Ndiritu, and Stage (2014) in their study on Kenya found that the distance to water sources and the level of food security were inversely related, with a higher marginal impact for female headed households implying that the longer the distance to the water source the lower the probability of food security, especially in female headed households. Domestic water supply programs often overlook women's productive uses of water for irrigation, household gardens, livestock, or other enterprises. In order to improve food security at the household level, irrigation and other water supply programs need to make stronger efforts to include women and to ensure that they have decision making rights over water.

7.5.3 Access to Income

According to FAO (2013), women's economic access to food can come through own production when they have access to land, livestock or other productive assets. They can also purchase food with income from wage employment as farm or non-farm wage workers or from self-employment. They can also access food through remittances from Government or Non-government organizations, from relatives, friends or through other informal means.

However, the level of unemployment among females is higher than that of males in Kenya. African Women Studies Centre (2014a) found that 57.1 per cent of the female respondents were unemployed as compared to 42.9 per cent of the male. KIPPRA (2013) reports that there are proportionately more males than females employed across all age cohorts. The report also shows that females in the 15-64 years age category are more likely (at 87 per cent) to be engaged in the informal economy as compared to about 82 per cent of their male counterparts. This seems to be the result of inequities in education attainment and gender based division of labour. Most of the informal economy jobs are casual, risky and exhibit low productivity and low pay, high levels of unpaid family employment. Informal sector workers are also excluded from social protection schemes or labour legislation. Workers are over exploited, working long hours while others could be under employed and could be classified as working poor. This is where most women who work in the informal sector find themselves working yet being unable to maintain food security in their households since the wages are not enough.

Those women, who are on wage employment in the agricultural sector in Kenya, are paid a lower wage than their male counterparts even when they do the same kind of work. Where the male workers will get a daily wage of Ksh.150 on a farm, the women most likely will be paid Ksh.100 yet they face the same prices of food in the market. Female workers are less organized in unions and are not; therefore, in a position to negotiate higher wages for fear of losing the job and so they persevere. Thus, with lower pay and with increasing needs at the household level, female headed households find themselves stuck in food insecurity.

Most financial services in rural areas in Kenya are directed towards households. The male members of the household usually receive credit and insurance via development agencies. Since women are mostly employed as mere helpers without any substantive decision making power within rural farming families, rather than entrepreneurs who have access to credit,⁷ they have no access to and control of assets such as land or livestock that can be deemed as collateral by lending institutions.

As mentioned earlier, it is less likely for a woman to own land since it is normally owned by her husband or another male member of the family. Furthermore, livestock of higher value such as cattle, sheep, goats, camels, horses and donkeys are owned by men while women own less valuable domestic animals such as chicken and rabbits. AWSC (2014b) found that 83 per cent of women in Kajiado, Bomet and Elgeyo Marakwet earned money from sale of domestic animals. However, it is

important to remember that the kind of income received was not from high value livestock such as cows, horses, donkeys or goats but mainly from chicken, ducks and rabbits since livestock such as cows, horse, donkeys and goats are regarded as belonging to men while chicken always referred to as 'birds' belong to women in most cultures. This proves to be a hindrance to women's access to cash and of course proves to be a hindrance to food security at the household level (Agarwal, 2003).

In Kenya, a significant proportion of women in the urban areas work in the industries as casual labourers and casual work typically pays less than full-time jobs. On average, women spend less time commuting than men with the result that they will have a smaller pool of jobs to choose from. It may also result in lots of women wanting work in the same location near to where they live which will result in lower equilibrium wages for those jobs. Occupations which are women-dominated are often relatively poorly paid jobs such as caring, cashiering, catering, cleaning, hair dressing, tailoring, and clerical jobs and there is continued under-representation in higher paid jobs within occupations. Women are generally relatively geographically immobile mainly because they are tied to their husbands' place of employment. This leads to a situation where women find themselves earning less than men, have fewer opportunities to choose from and this ends up translating into food insecurity.

⁷Fletschner and Kenny (2011)

7.5.4 Access to Affordable Energy

Sources

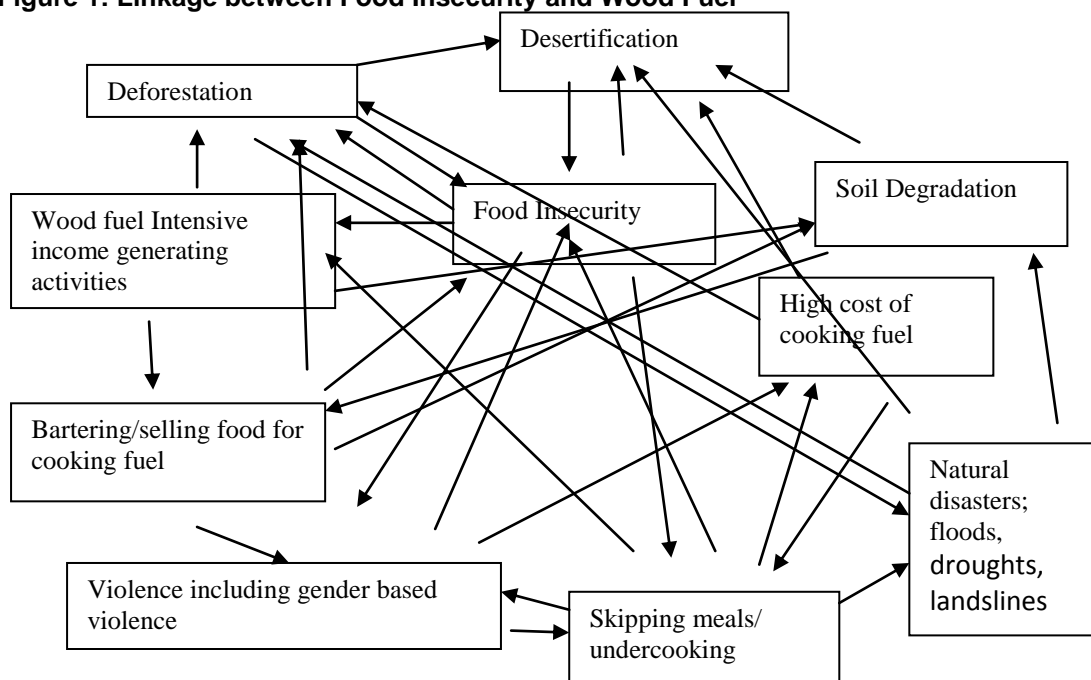
Lambrou and Piana (2006) argue that improved energy sources are needed in the rural areas to provide mechanical power for agriculture, food processing, water pumping and irrigation, modern fuels for cooking and heating, electricity for lighting, refrigeration, communication, commercial enterprises and community service. The UNDP (1995) Human Development Report argues that of the approximately 1.3 billion people living in poverty, 70 per cent are women and that poor women, especially those in the rural areas have more difficulties coming out of poverty than men due to their traditional socio-cultural roles. They spend long hours collecting fuel wood and carrying it back home over long distances. The time and effort expended doing these chores limits their ability to engage in other productive and income earning activities. In the process they suffer ill health because of hauling heavy loads of fuel and water and from cooking over smoky fires and of course these also limit their opportunities for education and this forms a cycle of poverty and food insecurity.

While energy is essential for development, decision-making about energy use has complex linkages with policies affecting poverty, food security, health, population, gender disparities, environmental quality, investments, foreign exchange, trade and national security.⁸

The World Food Program (2012) shows that there is a linkage between the use of fuel wood for cooking and food insecurity as shown in Figure 1.

⁸Lambrou and Piana (2006)

Figure 1: Linkage between Food Insecurity and Wood Fuel



Adapted from World Food Program (2012) *WFP Handbook on Safe Access to Firewood and Alternative Energy (SAFE)*

To be able to prepare food, it is the responsibility of the women to look for firewood and especially those who live in the rural areas. Biomass, mainly wood fuels, accounts for over two-thirds of total energy consumption in Kenya. Eighty percent of rural Kenyan women spend between 1-5 hours per household per day searching for fuel wood. The World Food Program (2012) reports that to collect firewood women usually have to venture into dangerous environments in which they risk gender-based violence, including rape. The Report also states that lack of safe access to fuel in humanitarian, transition and development settings has far-reaching consequences, influencing: food assistance outcomes; long-term food security; beneficiaries' safety, dignity, health and livelihoods; women's vulnerability to gender-based violence; and the environment. Women must walk long distances in insecure environments to gather fuel for cooking and for living. If these factors

are not addressed, they can have a direct bearing on food security and nutrition.

In cases where women find themselves as displaced persons due to some kind of violence as happened in the 2007/2008 post-election violence, women become subjects of violence and rape and especially when they venture out to gather fuel wood. This kind of violence has significant opportunity costs such as lowering women's productive and reproductive capacity, reducing their ability to care for other household members which, in turn, can result into increased hunger and malnutrition. Reproductive and productive losses-compounded by the costs for health, legal, security and judicial services for rape survivors-further aggravate the economic burden arising from lack of access to appropriate household energy (World Food Program, 2012). Harvesting of firewood for cooking contributes to deforestation, soil erosion and loss of agricultural and grazing

environments. Thus, it can seriously affect livelihood opportunities. Deforestation and erosion of land increases the risk of natural disasters. It also degrades arable land, reducing yields. This undermines displaced people's resilience by reducing their ability to become wholly or partly food self-sufficient.

Infrastructure that supplies energy can reduce the time or drudgery for food processing, cooking, and cleaning, freeing women's time for other productive activities, caring for their families, or even much-needed recreation (Quisumbing and Meinzen-Dick, 2001). Gender-sensitive energy programs can ease the double burden of lack of sufficient energy and poverty that women endure as they perform traditional household and community roles. They can also provide opportunities for education and income generation that will allow women to improve their social and economic status and raise the living standards of their families and communities (Lambrou and Piana, 2006).

7.5.5 Access to Proper Storage Facilities

For every mankind food is the main source to maintain the life cycle on this earth. It is essential for the successful accomplishment of any task. Due to heavy globalization and poverty, most people in Kenya face food insecurity. This lack of food occurs because of low production of food from the agricultural sector and failure to maintain appropriate food storage, adequate storage facilities are needed both in times of surplus and in times of scarcity.

If the weather conditions are good, there will be higher yields and in such case, the surplus produce could be stored for use in times of

unfavourable weather conditions and shortage of food crops. Due to poor infrastructure and inaccessible roads during floods, it might be impossible to distribute food from food surplus areas to the food scarce areas. Increase in prices as usually happens when there is not enough food can make it very difficult for the majority of the people to afford food but if they had stored the previous harvest, they may be shielded from these price increases. The stored food products help a lot in such situations. AWSC (2014b) study on women experiences on food security found that 76.3 per cent of the women respondents stored their food which shows that some women were aware of the need to store food for future use and this could help in ensuring food security.

Food must also be stored properly, otherwise food poisoning might occur or it might get spoilt or infested. The Kenyan study found that 36.4 per cent of the women stored their non-perishable foods by putting pesticides and storing them in sacks, while 35 per cent used the sun to dry them before putting the grains in sacks. Eleven percent stored the produce in the granary while 10.7 per cent stored it in their house was 11. Other ways of storage included drying by smoke, suspending from the roof and storing in plastic bags, tanks and buckets.

The Kenya National Food and Nutrition Policy document specifies measures and actions to be implemented so as to ensure food security and nutrition which affirms access to nutritionally adequate and safe food as the right of each individual living in Kenya. One of the issues under consideration, especially for food security sustainability, is storage. Kenya loses 30-40 per cent maize, 50 per cent fruits

and 7 per cent milk produced due to poor storage.

Kaneohe (2011) reports that mycotoxins are an identified food safety problem in Kenya and there have been a number of human and animal illnesses and deaths attributable to aflatoxins. Most farmers who are mainly women are not aware of the food safety issues associated with mycotoxins. They are also not aware of the harvest, drying and storage techniques necessary to prevent mycotoxin growth.

Storage of food, especially of cereals is a problem, especially for the small farmers and the householders. Whenever there is a glut, a good storage system would be one way of controlling storage conditions and the product stored in such facilities should be monitored for quality and food safety factors. In the Kenyan study only 2.9 per cent of the women respondents stored their perishable foods in fridges.

The availability of safe food improves the health of people and is a basic human right (UNHCR, 2005). Safe food contributes to health and productivity and provides an effective platform for development and poverty alleviation (WHO, 2002).

The Government of Kenya is committed to increasing agricultural production through subsidies in fertilizer and seeds. However, Government programs cannot just focus on productivity without giving consideration to addressing other key factors, such as adequate storage and processing facilities. There is need to raise awareness on good food storage methods that may include value addition in order to reduce instances of food losses after harvest and food poisoning from

aflatoxins. Good infrastructure such as silos, roads, railways, energy for cold storage and containerization and water are essential to ensure that food does not get spoilt before it reaches the consumers and this will also ensure that during periods of drought there will be enough food available for households.

7.5.6 Access to Markets and Infrastructure

Mobility and time constraints, gendered divisions of labour, as well as cultural and social norms, hamper the access of women to markets (FAO, 2013). Women in Kenya tend to be engaged in the production of traditional and subsistence crops which offer fewer opportunities to benefit from a market income (World Bank, FAO and IFAD, 2009). The AWSC (2014a) found that 57.1 per cent of the women respondents complained of poor infrastructure as compared to 42.9 per cent of the male respondents. The same study found that 55.6 per cent of the respondents complained of lack of market for their products as compared to 44.4 per cent of the male respondents. AWSC (2014b) found that even when women may have the money, most of the time they are unable to reach the markets due to poor infrastructure. During focus group discussions in Kajiado, women told stories of how during the rainy seasons, they sometimes steal donkeys to be able to cross over the hills and pass through wild life infested forests to go and purchase food in Kiserian since it would take them 3 days to travel to Nairobi to reach Kiserian which is still in Kajiado district. The study also found that lack of markets for their products subjects them to middlemen who buy their products very cheaply only to

make huge profits when they re-sell the same products in Nairobi or elsewhere.

On the other hand, within the household, women in Kenya often have little decision-making power related to marketing and selling activities as well as the spending of the money earned, although they often contribute considerable amounts of time to the production (AWSC, 2014b; Wanyeki, 2003). This is even more so regarding the sale of cash crops and livestock such as cattle and goats. Engaging in markets offers opportunities like horticulture and green house farming of landless women in Kenya to use revenues from selling bananas, carrots, French beans and other vegetables on local markets to compensate for shortfalls in their wages at coffee plantations although to install greenhouses is quite expensive for women to afford. Stability of food supplies and access are determined by food production, incomes, access to markets and social entitlements. Kenya has an inadequate and weak infrastructure as a result of years of under investment until 2 or 3 years ago when investment in infrastructure started rising. Road transportation and communications infrastructure may also empower women by offering greater mobility for marketing, seeking health care, attending school, and networking. This is especially important to women who are often tied to their homes (Quisumbing and Meinzen-Dick, 2001).

The decline in investment in rural infrastructure, such as feeder roads that link rural areas to markets, also affects women's access to markets. For example, a lot of cabbages, carrots, peas, potatoes and milk are produced in many counties of Kenya but most of this produce goes to rot due to the lack of accessible markets and poor infrastructure as

attested by findings by AWSC (2014b). In addition, lack of access to membership in marketing cooperatives also limits women's ability to market their produce. These constraints act as a disincentive to women farmers to produce surplus food, since the difficulties of marketing it are too great if not insurmountable.

7.5.7 Education

Improving women's education is probably the single most important policy instrument to increase agricultural productivity and reduce poverty. Women's education also leads to lower birth rates and lower child mortality, as well as better health, nutrition, and educational outcomes for her children (Quisumbing and Meinzen-Dick, 2001). The Study conducted by the AWSC (2014b) on women experiences on food security found that 11.9 per cent of the women respondents had never gone to school while a whopping 35.6 per cent had only primary school education. Since women in Kenya are the custodians of food security and nutrition at the household level, improving their education is the most important policy instrument Kenya can use to increase agricultural productivity, reduce poverty, and promote better health. According to Quisumbing (1996), one year of primary education provided to all Kenyan women farmers would boost farm yields by 24 per cent. Lack of education is the main cause of poor agricultural productivity in Kenya. It is a known fact that education contributes significantly to sustained rural income growth since education increases the ability of farmers to allocate their resources more efficiently and know the nutritional value of the foods they consume. Furthermore, education will help the

women to develop the skills needed to participate in knowledge intensive agriculture, adopt new technology and participate in marketing activities.

Gender inequality and discrimination at the household level prevent women from getting education which, in turn, has a negative impact on their decision making, production and marketing skills and contributing even more to food inequality in their households. In a study conducted by the African Women's Studies Centre in Kajiado County in Kenya, one woman known as Maria said in her oral testimony: *"I never went to school as my father was the old fashioned type. I would have wanted to go to school"*.

This practice of not taking girls to school is very common, especially among the pastoral communities. However, even among communities where one would expect that since education is free it should be for both boys and girls, more often than not the girls are pulled out of school to help in farming activities or look after the younger children when the parents are busy. Moreover, when the household falls short of money, they will prefer to take male children to school rather than the girls since it is believed that they will be wasting their money on the girls who will get married and the family will not benefit from their education while the boys are supposed to be the heirs and support to their families and the money spent on their education will remain in the family while the girls will move to their husband's place and so educating them seems like a waste of money. Without education, women are confined to the lowest step of the ladder in terms of social status and this translates to food insecurity not only to themselves but to the family as well.

7.6 Conclusions and Policy

Recommendations

This paper has discussed the experiences and challenges women in Kenya face in order to ensure and maintain food security. These challenges are: access and ownership of resources such as land; access to finance; access to water and affordable cooking energy; access to markets and proper infrastructure; lack of proper storage facilities; and low level of education.

The paper has shown that women in Kenya lack land ownership deeds since land is owned by either their husbands or male relatives; that women spend a lot of hours and walk long distances in search of water and wood fuel which prevents them from engaging in other income generating activities; that poor infrastructure also makes it difficult for women to access markets to sell or buy food items even when they have surplus produce to sell or enough money to buy food supplies..

Finally, the paper has also shown that poor or lack of education makes it hard for women to know the nutritional value of various foods and makes it difficult for them to get employment and earn an income to maintain food security and the household and national level.

This paper recommends that men and women should be sensitized to the stipulation of the Constitution that women are equal to men in the inheritance of land. It is, therefore, imperative on the part of County Governments, NGOs, civil societies and community based organizations to hold civic education sessions for both men and women and educate them on the same. Women should also be involved in the planning and implementation of various projects that have an impact on their lives.

Women should be actively involved in the identification, planning and implementation of water, silos for food storage, energy and road infrastructure projects. Educating girls benefits the whole community and so just like sensitization on land ownership, parents should also be educated through civic education on the need to educate the girl child because this will translate to improved welfare

both for her and the household as well in term of improved nutrition and food security.

Acknowledgments

This paper benefited from comments from Prof. Wanjiku Kabira, (Director AWSC): Dr. Jane Wambui (AWSC) and Dr. Kennedy Omoke (Department of Geography University of Nairobi).

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